

S23	6	((("6354483") or ("6474533") or ("6557746") or ("6582831") or ("6779705") or ("6779706")).PN.	USPAT; USOCR	OR	OFF	2005/09/26 14:34
S25	691	228/112.1.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 15:43
S26	361	228/2.1.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 16:05
S27	403	296/178.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 16:17
S28	329	52/638.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 16:19

S29	324	428/599.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:38
S30	731	428/654.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:38
S31	872	428/660.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:38
S32	910	428/650.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:38
S33	797	428/600.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:38

S34	649	428/615.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:39
S35	5450	S23 or S24 or S25 or S26 or S27 or S28 or S29 or S30 or S31 or S32 or S33 or S34	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 14:40
S36	6	S35 and ((protrud\$3 or protrusion)near50 height) and (project\$3 near50 plate) and thickness near20 ( smaller or small or lager or larger or big or bigger) and (insert\$3 near50 depth) and ((butt\$3 or abutment or abutt\$3) near50 portion) and (rotary near50 tool)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 15:11
S37	17	("20010015370"   "20020023941"   "20020030081"   "20020092888"   "20030005852"   "20030042293"   "6045027"   "6050474"   "6193137"   "6244496"   "6250037"   "6321975"   "6413610"   "6474533"   "6557746"   "6582831"   "6582832").PN. OR ("6793117").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/26 14:50
S38	4	("6193137"   "6250037"   "6321975").PN. OR ("6582832").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/26 14:52

S39	38	("5460317"   "5718366"   "5813592"   "6050474"   "6051325").PN. OR ("6193137").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/26 14:58
S40	29	S35 and (protrud\$3 or protrusion) and (project\$3 near50 plate) and thickness and (insert\$3 near50 depth) and ((butt\$3 or abutment or abutt\$3) near50 portion) and (rotary near50 (tool or probe))	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/26 15:13
S41	17	("5460317"   "5794835"   "5862975"   "6045028"   "6050474"   "6070784"   "6193137").PN. OR ("6321975").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/26 15:39
S42	21	("4711762"   "4794032"   "4975243"   "5098007"   "5267515"   "5302342"   "5306362"   "5407636"   "5460317"   "5611479"   "5616189"   "5685229"   "5690035"   "5769306"   "5813592"   "6050474"   "6237829"   "6250037"   "6419144"   "6471112").PN. OR ("6722286").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/26 16:20
S43	45	(friction near50 stir near50 weld\$3) and projec\$3 and protrude and height and plate and hollow and thickness and (butt\$3 or abutment or abutted) and joint and (probe or tool or head)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 09:12
S44	9938	(friction near50 stir near50 weld\$3) plate and hollow and ((different or dissimilar) thickness) and (butt\$3 or abutment or abutted) and joint and (probe or tool or head)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 09:15

S45	1207	(friction near50 stir near50 weld\$3) plate near50 hollow near50 (different or dissimilar) near50 (thickness or height or width or length) near50 (butt\$3 or abutment or abutted) near50 joint	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:30
S46	237	S45 and insert\$3 and (projection or protrusion or protrud\$3)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:34
S47	3	"2002095903"	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 10:52
S48	1	"200295903"	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 10:53
S49	3	((("6532712") or ("6446562") or ("6378264"))).PN.	USPAT; USOCR	OR	OFF	2005/09/27 10:56
S50	30111	(friction near50 stir near50 weld\$3) plate near50 (different or dissimilar) near50 (thickness or height or width or length)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:26

S51	1207	(friction near50 stir near50 weld\$3) plate near50 (different or dissimilar) near50 (thickness or height or width or length)near50 small near50 large near50 member near50 shape	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:18
S52	304	S51 and (projection or protrud\$3 or protrusion)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:26
S53	44437	(friction near50 weld\$3) plate near50 (different or dissimilar) near50 (thickness or height or width or length)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:26
S54	12304	S53 and (projection or protrud\$3 or protrusion)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:31
S55	18	S54 and hollow near50 shape near50 member near20 thickness	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:30

S56	2	"6378261".pn.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 11:34
S57	11	("1035206"   "4888931"   "5040344"   "5174083"   "5632126"   "5687522"   "6178711").PN. OR ("6378261").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/27 12:14
S58	102	join\$3 and (hollow near50 member) and plate and (dissimilar or diferent) and thickness and (probe or tool )	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 12:22
S59	79	weld\$3 and (hollow near50 member) and plate and (dissimilar or diferent) and thickness and (probe or tool )	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 12:23
S60	12	friction near50 weld\$3 and (hollow near50 member) and plate and (dissimilar or diferent) and thickness and (probe or tool )	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 12:42

S62	19383	plate and height and projection and (butt or abutment or abutted or abutment)and joint and portion and thickness and small and larger and protrusion and projections and insert and (rotary near (tool or probe)) and size	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 12:50
S63	2983	S62 and weld	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 12:51
S64	816	S63 and friction	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 12:51
S65	125	S64 and ( hollow with plate)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:03
S66	7	butting and plate and against and adjacent and plate and thickness and member and different and thickness and protruded and height and projections	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:09



S67	48	weld\$3 and ( abutt or abutment or abutting or butt) and plate and against and adjacent and plate and thickness and member and different and thickness and protruded and height and projections	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 14:06
S68	699	156/73.5.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:30
S69	622	156/73.5.ccls.	US-PGP UB; USPAT; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:30
S70	1175	156/580.ccls.	US-PGP UB; USPAT; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:30
S71	1670	S69 or S70	US-PGP UB; USPAT; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:31

S72	361	S71 and (projection or protrud\$3 or protrusion)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:45
S73	19	friction near50 weld\$3 near50 (plate or (hollow near5 member))near50 (projection or protrud\$3 or protrusion) near50 thickness	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:46
S74	2	"6862860".pn.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 13:52
S75	13	("3849871"   "5098007"   "5140913"   "5388529"   "5460317"   "5794835"   "5979742"   "6193137"   "6419142"   "6471112"   "6619534"   "6640515"   "6691484").PN. OR ("6862860").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/27 13:52
S76	19	("3860468"   "5088638"   "5460317"   "5492581"   "5697511"   "5697544").PN. OR ("5979742").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/27 13:53
S77	13	("3849871"   "5098007"   "5140913"   "5388529"   "5460317"   "5794835"   "5979742"   "6193137"   "6419142"   "6471112"   "6619534"   "6640515"   "6691484").PN. OR ("6862860").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/27 13:55

S78	1	(abutt or abutment or abutting or butt) near50 plate near50 against near50 adjacent near50 plate near50 thickness and member and different and thickness and protruded and height and projections	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 14:08
S79	1	(abutt or abutment or abutting or butt) near50 plate near50 thickness and member and different near50 protruded near50 height near50 projections	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 14:25
S80	22	(abutt or abutment or abutting or butt) near50 plate near50 thickness and member and different near50 projections	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 14:11
S81	137	weld near50 (abutt or abutment or abutting or butt) near50 plate near50 thickness near50different near50 projections	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 14:12
S82	9	("3197604"   "3351734"   "3575574"   "4075453"   "4550244").PN. OR ("5493097").URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/27 14:15
S83	1	("1562227").URPN.	USPAT	OR	ON	2005/09/27 14:24

S84	214	(abutt or abutment or abutting or butt) with weld\$3 with plate with (protrusion or projection or protrud\$3)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 14:33
S85	45	BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:39
S86	2	friction near50 BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:15
S87	2	friction and BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:15
S88	1	friction near50 stir and (BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE )	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:16

S89	1	friction near50 stir and BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:16
S90	3	BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE near50( protrusion or projection or protrud\$3)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:18
S91	7	BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE and( protrusion or projection or protrud\$3)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:20
S92	3	("2288433").URPN.	USPAT	OR	ON	2005/09/27 15:18
S93	3	BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 PLATE with( protrusion or projection or protrud\$3)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:21
S94	1	BUTT near50 WELD\$3 near50 DIFFERENT near50 THICKNESS near50 ((PLATE or member) near50 projection)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/27 15:23

S95	6	((("3860468") or ("5088638") or ("5460317") or ("5492581") or ("5697511") or ("5697544")).PN.	USPAT; USOCR	OR	OFF	2005/09/27 16:02
S96	2	"0797043"	EPO; DERWEN T	OR	ON	2005/09/27 16:03
S97	37	((("2231480") or ("2469897") or ("2795688") or ("2883518") or ("2919342") or ("3121785") or ("3196247") or ("3368059") or ("3435183") or ("3592993") or ("3621178") or ("3648014") or ("3992602") or ("4048463") or ("4130750") or ("4262184") or ("4273983") or ("4546226") or ("5302797") or ("5449878") or ("5541382") or ("5565117") or ("5599467") or ("5632912") or ("5767476") or ("5808266") or ("5961853") or ("6403913")).PN.	USPAT; USOCR	OR	OFF	2005/09/28 08:38
S98	2	((("6601751") or ("6523732")).PN.	USPAT; USOCR	OR	OFF	2005/09/28 08:38

S99	34	("3291957"   "3438428"   "3529660"   "3765589"   "3908886"   "4194937"   "4444614"   "4527727"   "4529115"   "4545519"   "4572753"   "4647325"   "4798639"   "5029746"   "5147082"   "5238170"   "5575884"   "5651494"   "5709823"   "5782575"   "5785786"   "5800672"   "5921457"   "6089438"   "6099364"   "6148515"   "6176953"   "6202915"   "6238503"   "6450393"). PN. OR ("6523732"). URPN.	US-PGP UB; USPAT; USOCR	OR	ON	2005/09/28 08:42
S10 0	46	(friction near50 stir near50 weld\$3) and ((pin near20 tool)or probe)and plate and (projection or protrusion or protrud\$3) and thickness	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/28 09:07
S10 1	5	((("5460317") or ("6540128") or ("6729526") or ("6715665") or ("6843405")).PN.	USPAT; USOCR	OR	OFF	2005/09/28 09:08
S10 2	378	228/151.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/28 11:12
S10 3	103	(butt or friction near20 stir)near50 weld\$3 and (thick or lager) and (thin or small) near50 thickness and (member or plate or sheet or metal) near50 (projection or protrusion or protrud\$3)	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/28 13:17

S10 4	324	428/599.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/28 13:31
S10 5	411	428/598.ccls.	US-PGP UB; USPAT; USOCR; EPO; JPO; DERWEN T; IBM_TDB	OR	ON	2005/09/28 13:31
S10 6	3	("1265990").URPN.	USPAT	OR	ON	2005/09/28 13:45